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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,348	09/25/2000	Masaki Nakano	040356/0316	1908

7590

12/10/2002

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EXAMINER

LAM, THANH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 12/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,348

Applicant(s)

Nakano

Examiner

Thanh Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 7, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this communication is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-21 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 14
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koide et al. (Pn. 5,936,312) in view of Nakano (pn 6,049,152).

Koide et al. disclose a motor/generator comprising: a first rotation shaft (156); a first rotor (132) rotating with the first rotation shaft and having a first number of magnetic poles (135) that form a first magnetic field; a second rotation shaft (126) rotating relative to the first rotation shaft and supported co-axially with the first rotation shaft; a second rotor (142) rotating with the second rotation shaft and having a second number of magnetic poles (145) that form a second magnetic field, the first rotor and the second rotor being disposed in series along the first rotation shaft; a stator (133) provided with coils (134) that generate a first rotating magnetic field in synchronism with the first magnetic field by application of a first alternating current, and generate a second rotating magnetic field in synchronism with the second magnetic field by application of a second alternating current.. However, Koide et al. do not disclose the first number of magnetic poles of first rotor differ from the second number of magnetic poles of the

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second rotor and a current control device that supplies a composite current comprising the first alternating current and the second alternating current to the coils.

Nakano discloses a first number (3, fig. 19 having 8 poles N and S) of magnetic poles of the first rotor differ from a second number (4 fig. 19 having 4 poles N and S) of magnetic poles of the second rotor and a current control device that supplies a composite current (see Abstract) comprising the first alternating current and the second alternating current to the coils.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second rotors of Koide et al. with the first number of magnetic poles of the first rotor differ from the second number of magnetic poles of the second rotor and utilize the current control device that supplies a composite current comprising the first alternating current and the second alternating current to the coils as taught by Nakano to reduce the current losses.

Regarding claim 2, Koide et al. disclose the stator is disposed facing an outer periphery of the first rotor and the second rotor.

Allowable Subject Matter


3. Claims 4-21 are allowed.
4. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The fax phone number for this Group is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0656.



Thanh Lam

Patent Examiner